ABSTRACT OF THE DISCLOSURE

Shot exposure of arranging first marks on a photosensitive substrate via a reticle in M rows and N columns (e.g., three rows and three columns) at a predetermined column interval and row interval is repeated m x n times (e.g., 2 x 2), thereby forming first marks in M x m rows and N x n columns (six rows and six columns) on the photosensitive substrate. M and m are natural numbers which are relatively prime, N and n are natural numbers which are relatively prime, and M > m and N > n hold. Shot exposure of arranging second marks on the photosensitive substrate via the reticle in m rows and n columns at the predetermined column interval and row interval is repeated M x N times, thereby forming second marks in M x m rows and N x n columns. Accordingly, M x m x N x n overlay marks are formed from the first and second marks. The misalignment amounts of the first and second marks are measured for each of the M x m x N x n formed overlay marks. The distortion amount is calculated on the basis of the misalignment amounts. Distortion measurement can be performed at a higher precision.